

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims

1. (Currently Amended) A method for formulating an enzyme comprising:
obtaining ~~at least one~~ a library of glucose oxidase genes;
creating a library of ~~at least one~~ mutated glucose oxidase genes;
introducing each mutated glucose oxidase gene of the library into separate expression vectors;
inserting the expression vectors into host organisms;
growing colonies of the host organisms; and
screening the colonies for desirable properties by determining whether the colonies contain active glucose oxidase and determining whether the colonies have peroxide resistant properties,
wherein determining whether the colonies have peroxide resistant properties comprises:
incubating the colonies in peroxide; and
determining whether the colonies have active glucose oxidase after incubating the colonies in peroxide.
2. Cancelled.
3. (Original) A method for formulating an enzyme according to claim 2, wherein screening the colonies for desirable properties further comprises testing glucose oxidase from the colonies for functionality.
4. (Original) A method for formulating an enzyme according to claim 2, wherein determining whether the colonies have peroxide resistant properties is only performed if results of determining whether the colonies contain active glucose oxidase are positive.

5. (Original) A method for formulating an enzyme according to claim 3, wherein testing glucose oxidase from the colonies for functionality is only performed if results of determining whether the colonies contain active glucose oxidase are positive and if results of determining whether the colonies have peroxide resistant properties are positive.

6. (Original) A method for formulating an enzyme according to claim 2, wherein determining whether the colonies have active glucose oxidase comprises employing a substance that changes color in the presence of active glucose oxidase.

7. (Original) A method for formulating an enzyme according to claim 6, wherein the substance is leuco-crystal-violet.

8. (Original) A method for formulating an enzyme according to claim 2, wherein determining whether the colonies have active glucose oxidase comprises checking for fluorescence.

9. Cancelled.

10. (Original) A method for formulating an enzyme according to claim 2, wherein testing glucose oxidase from the colonies for functionality comprises employing glucose oxidase from the colonies in sensors.

11. (Original) A method for formulating an enzyme according to claim 10, wherein employing glucose oxidase from the colonies in sensors comprises:

extracting glucose oxidase from the colonies;

immobilizing the glucose oxidase after extracting the glucose oxidase from the colonies;

placing the immobilized glucose oxidase in a sensor; and

testing the sensor.

12. (Original) A method for formulating an enzyme according to claim 11, wherein extracting glucose oxidase from the colonies comprises employing an ionic column to extract glucose oxidase from the colonies.

13. (Original) A method for formulating an enzyme according to claim 11, wherein extracting glucose oxidase from the colonies comprises:

removing the glucose oxidase from the colonies;
purifying the glucose oxidase; and
characterizing the glucose oxidase.

14. (Original) A method for formulating an enzyme according to claim 13, wherein removing the glucose oxidase from the colonies comprises grinding the colonies in a homogenizer into cell components.

15. (Original) A method for formulating an enzyme according to claim 14, wherein removing the glucose oxidase from the colonies further comprises fractionating the cell components employing centrifugation and differential solubility after grinding the colonies in a homogenizer.

16. (Original) A method for formulating an enzyme according to claim 13, wherein removing the glucose oxidase from the colonies comprises disrupting the colonies into cell components via sonication.

17. (Original) A method for formulating an enzyme according to claim 16, wherein removing the glucose oxidase from the colonies further comprises fractionating the cell components employing centrifugation and differential solubility after disrupting the colonies via sonication.

18. (Original) A method for formulating an enzyme according to claim 13, wherein purifying the glucose oxidase comprises purifying the glucose oxidase by employing chromatography methods.

19. (Original) A method for formulating an enzyme according to claim 1, wherein the glucose oxidase is obtained from an organism and wherein the organism is selected from a group consisting of *Aspergillus Niger*, *Penicillium funiculosum*, *Saccharomyces cerevisiae*, and *Escherichia Coli*.

20. (Original) A method for formulating an enzyme according to claim 1, wherein creating at least one mutated glucose oxidase gene comprises employing polymerase chain reaction techniques to create at least one mutated glucose oxidase gene.

21. (Original) A method for formulating an enzyme according to claim 1, wherein creating at least one mutated glucose oxidase gene comprises employing error-prone polymerase chain reaction techniques to create at least one mutated glucose oxidase gene.

22. (Original) A method for formulating an enzyme according to claim 1, wherein creating at least one mutated glucose oxidase gene comprises employing gene shuffling techniques to create at least one mutated glucose oxidase gene.

23. (Original) A method for formulating an enzyme according to claim 1, wherein the method further comprises creating a next generation of mutated glucose oxidase genes after screening the colonies for desirable properties.

24. (Original) A method for formulating an enzyme according to claim 23, wherein creating a next generation of mutated glucose oxidase genes is repeated approximately 2 to 6 times.

25-43. Withdrawn.